

# CITY OF BELLINGHAM STORMWATER MANAGEMENT PROGRAM



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## FORWARD

This program document has been created to meet the requirements of the Western Washington Phase II Municipal Stormwater Permit (WAR04-5550). This Stormwater Management Plan (SWMP) is prepared to demonstrate the City's understanding of and commitment to fully meeting the regulatory requirements of this permit. The SWMP is a dynamic document that will be updated on an annual basis and will be integral to our permit compliance.

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This Stormwater Management Plan (SWMP) has been constructed to provide information on how the City of Bellingham has met or will meet the requirements of the Western Washington Phase II Municipal Stormwater Permit. References to this document will be called out as the "Permit".

References to activities related to the minimum requirements that have partially or completely met the goals of the requirement are shown in bold with a 2007, 2008, 2009, or 2010 date. The 2007 date may actually indicate items that took place in prior years.

## 1. PUBLIC EDUCATION AND OUTREACH

The City of Bellingham SWMP will include an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the City. The goal of the education program will be to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. Our education program is being developed locally but we are open to sharing this effort with other primary and secondary permittees.

Our education program has or will consist of:

- a. The City will provide or will have provided an education and outreach program for our stormwater service area by February 16, 2009. The outreach program will be designed to achieve measurable improvements (to the degree possible) in the target audience's understanding of the problem and what they can do to solve it.

Education and outreach efforts will be prioritized to target the following audiences and subject areas:

- i. General public

- General impacts of stormwater flows into surface waters.
- Impacts from impervious surfaces.
- Source control BMPs and environmental stewardship actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping and buffers.

- ii. General public, businesses, including home-based and mobile businesses

- BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
- Impacts of illicit discharges and how to report them.

- iii. Homeowners, landscapers and property managers

- Yard care techniques protective of water quality.
- BMPs for use and storage of pesticides and fertilizers.
- BMPs for carpet cleaning and auto repair and maintenance.
- Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.
- Stormwater pond maintenance.

- iv. Engineers, contractors, developers, review staff and land use planners

- Technical standards for stormwater site and erosion control plans.
- Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.
- Stormwater treatment and flow control BMPs.

- b. The City will endeavor to measure the understanding and adoption of the targeted behaviors among the targeted audiences. Measurement results that are obtained and deemed valid, will be used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.
- c. The City will track and maintain records of public education and outreach activities.

## 2007

**The City of Bellingham has a robust education and outreach program. The City has provided education to the general public and targeted groups at the general rate of 2-3 subjects per year. Educational subjects that have been addressed by, for or in conjunction with the City include but are not limited to:**

- Low Impact Development**
- LEED Develop**
- Construction Stormwater Management**
- Concrete Waste Disposal**
- Pet Waste**
- Pressure Washing**
- Car Washing**
- Spill Control**
- Phosphorus Education – Lake Whatcom**
- Stormwater Education Program – 4<sup>th</sup> and 5<sup>th</sup> grades**
- Grass Clippings Disposal**
- Coordination with WSU and County for Yard Care Education**

## 2008

- Stormwater Education Program—4<sup>th</sup> and 5<sup>th</sup> grades**
  - Details include:**
    - 4<sup>th</sup> Grade behavior change program that uses salmon as a window into watershed stewardship and basic stormwater education.**
    - 5<sup>th</sup> Grade Water and Me Out the spout and down the drain**
- Pet Waste**
- Car Washing and Boat Washing**
- Grass Clipping Disposal**
- Household Hazardous Waste Collection for Lake Whatcom**
- BMPs for storage, use, and disposal of hazardous waste and chemicals**
- Stormwater Hotline for reporting illicit discharges**
- No Dumping Drains to Bay” label program**
- Impacts of illicit discharges**
- Solutions for correcting illicit discharges**
- Disposal requirements for dry cleaning, painting, boat building and repair, veterinarian business waste**

## 2009

**Stormwater Education through the Water and Me 5<sup>th</sup> grade classes -35 classes were reached**

**Pet waste**

**Car washing outreach program**

**Proper grass clipping disposal**

**BMPs for storage , use, and disposal of hazardous wastes and chemicals**

**Stormwater hotline available to report illicit discharges**

**Impacts of illicit discharges**

**Solutions for correcting illicit discharges**

**Visited 37 landscaping related businesses to provide pollution prevention education about use of pesticides and fertilizers and storage requirements**

**Source control technical assistance regarding disposal requirements for waste generated by auto body shops, auto repair shops, dentist offices, electronic waste collection facilities, pharmacies, photo processing shops, commercial print shops, and more**

## 2010

- **Stormwater Education through the Water and Me Education Program: 27 fifth grade and 6 third grade classes including about 900 students and about 75 adults (teachers & parents). Curriculum includes watersheds and the Puget Sound Starts Here Drain Rangers program. Students learn about their connection to watersheds and how to prevent stormwater pollution, including watershed-friendly car washing, picking up litter, reducing car trips, picking up pet waste, and reducing chemical use.**
- **Included pet waste fliers in the Whatcom Humane Society's new and renewing dog license mailings to over 1,000 Bellingham and Whatcom County licensed dog owners. Attended two community pet events with our Hounds for Healthy Watersheds interactive educational display reaching at least 800 dog lovers.**
- **Distributed watershed-friendly car wash videos to local clubs and school groups. Ran a watershed-friendly car wash educational advertisement in the local newspaper.**
- **Provided storm drain markers to volunteers coordinated by Nooksack Salmon Enhancement Association.**
- **Created a Lake Whatcom Edition of WSU Extension's Rain Garden Handbook. Created the Lake Whatcom Watershed Residents' Guide, a resource packet of all outreach materials on a variety of topics including phosphorus, yard care, native plants, pet waste, boating, vehicle maintenance, outdoor washing and water conservation.**
- **Advertising the RSRP and HIP programs via two methods- a door hanger campaign as well as yard signage for participating residents.**

- **Stormwater hotline available to report illicit discharges.**
- **Impacts of illicit discharges and solutions for correcting illicit discharges.**
- **One-on-one LID education as part of Homeowner Incentive Program including education and technical assistance on LID techniques, site design, pervious paving, and retention of forests and mature trees and much more.**
- **One-on-one education provided to stormwater pond owners regarding proper maintenance as part of the private stormwater facility inspection program.**
- **Worked with engineers, contractors, developers, review staff and land use planners regarding stormwater treatment and flow control BMPs under the private and public stormwater facilities program.**
- **Provided auto repair shops and gas stations one on one education and technical assistance regarding storage of automotive chemicals, proper use and disposal practices for cleaning processes, guidance on how car wash and floor cleaning soaps interact with oil/water separators, cleanout of storm drain catch basins, proper maintenance and use of parts washers, and other BMPs provided regarding other hazardous chemicals.**
- **Assisted businesses with identifying storm drains versus sewer drains to implement proper BMPs with each drain system.**
- **Provided guidance on spill prevention to storm drains, and distributed spill kits to some businesses.**
- **Information regarding technical standards for stormwater site and erosion control provided in permit form to many parties including contractors, developers and more by City engineers and review staff.**



## **2. PUBLIC INVOLVEMENT AND PARTICIPATION**

The City will provide opportunities for public involvement through Council processes, the Public Works Advisory Board, neighborhood and watershed committees, stewardship programs and planned environmental activities. The City will comply with applicable State and local public notice requirements as necessary for developing this SWMP.

In addition the City will provide the following:

On an annual basis, beginning in 2008, the City will at a minimum post the Stormwater Management Plan (SWMP) required by the Municipal Phase II permit and the annual report to the Department of Ecology on our website. The posting should be provided by April 30<sup>th</sup> of each year. The public will be invited to review and provide comments in writing regarding the SWMP. The Stormwater Manager of the City of Bellingham will record and compile all comments. By June 30<sup>th</sup> of each year, the Public Works Advisory Board for the City of Bellingham will convene to review the existing SWMP and all public comments offered regarding the SWMP. The Public Works Advisory Committee will make a recommendation to the Public Works Director on any needed or proposed changes to the SWMP. Minor changes to the SWMP may be approved administratively. Major changes that would require a code modification will be handled through public process.

### **2007**

**The City of Bellingham updated our stormwater code in May of 2006 to largely include the requirements of the 2005 Ecology Manual. A public process was utilized for that work including three workshops regarding the changes, one for builders and contractors, one for engineers and architects and one for the general public. The code change was reviewed by the Public Works Advisory Board and finally reviewed and approved through public process with our Council.**

**The City has customarily provided 1-2 forums per year for the public or targeted groups to receive information regarding stormwater management and provide comments accordingly.**

### **2008**

**Residential Stormwater Retrofit Program for Lake Whatcom (on site retention) to help with phosphorus TMDL. Details include:**

**2 staff presentations to Silver Beach Neighborhood on residential stormwater retrofit program**

**Two Focus Groups**

**3 Stormwater 101 workshops, 32 homes participated**

**Pre and Post Workshop survey to measure self reported behavior**

**BMPs for gardening, landscaping, low impact development practices, stewardship choices**



## 2009

### Residential Stormwater Retrofit Program

Conducted 10 homeowner workshops for RSRP participants

Total of 69 homes were represented at the workshops

Details include:

- 1) Introduction to Lake Whatcom data and stormwater issues
- 2) Lake Whatcom Friendly Lawn Care
  - a) proper use of fertilizer and pesticide in Phosphorus-limited watershed
  - b) use of native plantings
  - c) lawn removal and other watershed friendly landscaping techniques
- 3) Low Impact Development introduction and explanation
  - a) rain gardens and other bioinfiltration methods
  - b) porous pavers
  - c) downspout diversion
  - d) rainwater harvesting and reuse
- 4) Rain barrels as stormwater management tools
- 5) How to use and maintain rain barrels

### Silver Beach Creek Watershed Public Conversation

Residential involvement in future outreach program planning for the Lake Whatcom Watershed

### Public Outreach for Modifications to City of Bellingham Stormwater Code Update

2 public meetings

Workshop

Planning Commission presentation

City Council presentation

Public comments

## 2010

### Residential Stormwater Retrofit Program

Completed two homeowner workshops, representing 12 properties. Details same as workshops for 2009.

### Homeowner Incentive Program

Met with 54 homeowners one-on-one to discuss potential sources of water quality impacts on individual properties and potential solutions. Solutions, if implemented, would qualify for partial or full reimbursement under the Homeowner Incentive Program grant.



### Lake Whatcom: *Silver Beach Creek Watershed (SBCW) Pilot*

Held two SBCW Public Conversations. April event included a focus on the Lake Whatcom Homeowners Incentive Program (HIP) and the types of LID BMPs the

**City is encouraging homeowners to participate in. August event included displays about HIP and RSRP programs, septic system maintenance, watershed-friendly yard care, pet waste, outdoor washing, aquatic invasive species and the Lake Whatcom TMDL.**

### **3. ILLICIT DISCHARGE DETECTION AND ELIMINATION**

The City of Bellingham has or will have an ongoing program to detect and remove illicit connections, discharges as defined in 40 CFR 122.26(b)(2), and improper disposal, including any spills not under the purview of another responding authority, into the municipal separate storm sewers owned or operated by the City. The City will implement an ongoing illicit discharge detection and elimination program that meets the requirements of the Phase II permit by August 15, 2011.

At a minimum the City will provide or has provided:

- a. A municipal storm sewer system map or mapping system that will be periodically updated and will include the following information:
  - i. The location of all known municipal separate storm sewer outfalls and their receiving waters. The location of all known structural stormwater BMPs owned, operated, or maintained by the City. The map or mapping system will include at a minimum all storm sewer outfalls with a 24 inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. Map attributes will include:
    - Tributary conveyances (type, material, and size when known).
    - Associated drainage areas.
    - Land use.
  - ii. The City has or will have an ongoing program to map all connections to the Bellingham municipal separate storm sewer authorized or allowed by the City after February 15, 2007.
  - iii. The City will map any known geographic areas that are served by our municipal separate stormwater system but that do not contribute to the discharge of stormwater to surface waters.
  - iv. The City will make available to Ecology, upon request, municipal storm sewer system map(s) depicting the aforementioned information. The City will attempt to provide mapping in a format preferred by the Department of Ecology.
  - vi. Upon request, the City will provide mapping information to co-permittees and secondary permittees.

#### **2007**

**The City of Bellingham currently has a GIS mapping system that includes a stormwater coverage. The City's mapping is continually being updated and records are being refined. It is probable, at this time, that we have met the requirement for mapping all systems 24 inch and larger and all municipally owned stormwater facilities. It may be possible though, that there are some map deficiencies in the southerly portion of the City. If so these deficiencies will be addressed prior to 2011.**

## 2008

The City of Bellingham has continued in updating the map.

## 2009

The City of Bellingham is in substantial compliance with this section, we have GIS coverage of both public stormwater systems and private stormwater facilities. Map has ongoing update process through our Public Works Geographic Information Systems (GIS) section.

## 2010

This requirement will be met by the required deadline.

b. Bellingham Municipal Code 15.42.020.U and 15.42.050.C, effectively prohibits non-stormwater, illegal discharges, and/or dumping into the City's municipal separate storm sewer system to the extent allowable under State and Federal law. This requirement was first adopted in September 1995 and was reiterated in our most recent code update in May of 2006. Necessary amendments to this code brought to the City's attention will be adopted by August 15, 2009 or within one year of an Ecology request to do so, whichever will be the longer term.



i. The City understands that we do not need to regulate the following categories of non-stormwater discharges:

- Diverted stream flows.
- Rising ground waters.
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)).
- Uncontaminated pumped ground water.
- Foundation drains.
- Air conditioning condensation.
- Irrigation water from agricultural sources that is commingled with urban stormwater.
- Springs.
- Water from crawl space pumps.
- Footing drains.
- Flows from riparian habitats and wetlands.
- Non-stormwater discharges covered by another NPDES permit.
- Discharges from emergency fire fighting activities in accordance with permit condition S2 *Authorized Discharges*.

ii. Our regulatory mechanisms prohibit the following categories of non-stormwater discharges that do not meet the stated conditions:

- Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges will be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.
- Discharges from lawn watering and other irrigation runoff. These will be minimized through, at a minimum, public education activities (see section S5.C.1) and water conservation efforts.
- Dechlorinated swimming pool discharges. Any discharges that may be allowed will be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary. Discharge volume and velocity should normally be a condition of any permitted discharge in order to prevent scour or re-suspension of sediments in City stormwater conveyances. Swimming pool cleaning wastewater and filter backwash should not be permitted into any municipal stormwater system.
- Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents. The City will attempt to minimize these discharges through, public education activities, water conservation efforts and/or code enforcement. For City operations, we will minimize, to the extent practicable, the amount of street wash and dust control water used. At active construction sites, BMC15.42.060.F.2.e.ii(d) requires that street sweeping must be performed prior to the washing of any street.
- Stormwater discharges associated with construction, including de-watering practices, are regulated and enforced per BMC15.42.

iii. The City will further address any category of discharges in i or ii above if the discharges are identified as significant sources of pollutants to waters of the State.

iv. The enforcement of all stormwater code provisions including illicit discharges is provided for in BMC 15.42 subsections 070-110.

## 2007

**The City of Bellingham is active in the enforcement of non-stormwater discharges. Bellingham Public Works and Fire personnel have been instructed on the need to prevent potable water discharges to stormwater systems. City project specifications and conditions indicate the need to prevent non stormwater discharges and violations of this issue can be enforced through existing regulations.**

## 2008

The City of Bellingham currently has a prohibition on illicit discharges but code is being changed in 2009 to more closely comply with Ecology language on this topic.

## 2009

While the City believes that we have been in compliance since 1995 regarding the stormwater ordinance we updated it in June of 2009 to reflect the newest language in NPDES permit.

## 2010

The City of Bellingham Stormwater Department has staff designated to respond to non-stormwater discharges.



c. The City has developed or will develop and implement a program to detect and address non-stormwater discharges, spills, illicit connections and illegal dumping into our municipal separate storm sewer system. The program has been substantially developed but any elements necessary to our permit compliance will be provided by August 15, 2011. The City plan has or will include:

i. Procedures for locating priority areas likely to have illicit discharges, including at a minimum: evaluating land uses and associated business/industrial activities present; areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in spills.

ii. Field assessment activities, including visual inspection of priority outfalls identified in i, above, during dry weather and for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges.

- Receiving waters have been or will be prioritized for visual inspection no later than February 15, 2010. The City has or will have conducted field assessments of three high priority water bodies by February 15, 2011. Field assessments on at least one high priority water body will be made each year thereafter.

- Screening for illicit connections will be conducted using: Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004, or another methodology of comparable effectiveness.

iii. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the City. Procedures will be enacted to determine when a discharge must be immediately contained and the steps necessary for that containment.

The City will demonstrate compliance by working toward the goal of investigating (or referring to the appropriate agency) within 7 days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping. The City also sets a goal of investigating (or referring) problems and violations determined to be emergencies or otherwise judged to be urgent or severe as soon as is practicable.

iv. The City has or will put in place procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other methods that are deemed practicable.

v. The City has or will have procedures for removing the source of the discharge; including notification of appropriate authorities; notification of the property owner; technical assistance for eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated.

The City will show compliance by setting the goal of initiating an investigation within 21 days of a report or discovery of a suspected illicit connection to determine: the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection. Upon confirmation of the illicit nature of a storm drain connection, termination of the connection will be provided as soon as possible with the goal of doing so within 180 days. The use of enforcement authority will be used to the extent needed and to the degree possible under City, State and Federal laws.

## 2007

**The City has made procedural changes over the years to be more responsive to spills and illicit discharge reports. The greatest issue for us may be in the record keeping associated with these conditions.**

**The City of Bellingham has been fairly active in the area of illicit discharges. Since 2004 the City has provided an annual dry weather monitoring program that looks at a minimum of one major drainage basin per year. The City has reviewed and collected data on the following streams.**

**Lake Whatcom and Silver Beach Creek, 2004**

**Whatcom Creek and Tributaries, 2004**

**Padden Creek and Tributaries, 2005**

**Squalicum Creek and Tributaries, 2006**

**Whatcom Creek and Tributaries, 2007 repeat in conjunction with TMDL work**

**Lake Whatcom and Silverbeach Creek repeated as part of Lake Whatcom TMDL**

**Silver Creek Watershed, Bear Creek and Tributaries, planned for 2009**

**Chuckanut Creek and Tributaries, planned for 2009**

**Bellingham Bay, planned for 2009-2010**

**In addition, the City obtained equipment and have begun the process of scanning all stormwater lines in the City for the purpose of proper maintenance and to find illicit discharges.**

## 2008

The City, through our Source Control Partnership with Ecology, has made great strides in reporting and recordkeeping for illicit discharge issues that have been discovered as a part of this program. These records are provided to Ecology under the terms of our agreement. Furthermore, all ERTS reports are kept electronically showing both the problem and any necessary City actions. Records and reports are also available for our dry weather monitoring program and for our stormwater scanning.

## 2009

City is in substantial compliance with permit directive and any lacking areas will be fully addressed prior to due date of August 16, 2011.

## 2010

The City is working on procedural issues for better tracking of illicit discharges, ERTS complaints and other data. Currently, there are several programs used to manage the different data streams.

- i. Procedures have included prioritization of basins for dry weather monitoring and storm sewer scanning. Basins with the greatest need for water quality ie streams were reviewed first. Scanning has looked first at downtown and core areas where water quality is lowest in the City.

- ii. The City has had a robust program of collecting data on stream water quality.  
The City has satisfied the requirement to have receiving waters prioritized by visual inspection by the deadline. The City has conducted field assessments on more than three high priority water bodies. Bellingham Bay has not been assessed yet but will be at sometime in the future. Please reference work done in 2007 to see specific details on water bodies assessed.

In the Silver Creek Watershed, Bear Creek and its tributaries within Bellingham will be done in 2011. Chuckanut Creek and Tributaries, will be completed in 2011. Bellingham Bay is scheduled to be completed in the Summer of 2012.

We have this manual and have referred to it. Most of our IDDE program was begun prior to the manual being available. We also use other manuals listed in the reference section of the "City of Bellingham Urban Streams Monitoring Program"

- iii. The City has procedures for the containment of discharges when found. These need to be better memorialized prior to August.



**The City has responded to complaints within 7 days and very often addresses potential illicit discharges, spills or illegal dumping within 24 hours.**

- iv. **The City currently uses all resources available to trace the source of an illicit discharge including visual inspection, opening manholes, using mobile cameras, dye testing, smoke testing, taking samples and having them analyzed, and other practices and tools to find the source.**
- v. **When illicit discharges are discovered the City has policies and procedures in place for notifying appropriate parties. Under the Local Source Control program there is a large focus on providing technical assistance on eliminating the discharge. If the illicit discharge is found by another program outside of the Local Source Control efforts are sometimes less technical assistance based and more enforcement based.**

**The City has achieved outlined tasks within time frames noted above.**

d. The City has provided or will provide information on the hazards of illicit discharges and improper waste disposal to public employees, businesses, and the general public within the following schedule.

- i. No later than August 15, 2011, the City will distribute appropriate information to target audiences identified in the Public Education and Outreach section of this SWMP.
- ii. No later than February 15, 2009, the City will provide the following:
  - Publicly list and publicize a hotline or other local telephone number for public reporting of spills and other illicit discharges.
  - Maintain a record of calls received and follow-up actions as is indicated in S5.C.3.c.ii. through v. above.
  - Include a summary of calls in the annual report in accordance with section S9 (Reporting and Record Keeping Requirements) of the permit.

## **2008**

**The Source Control program has been dealing directly with businesses on illicit discharges. Education staff has also dealt with public information on various topics. Please see the education section of this plan for additional details. The City first implemented a Stormwater number in 2001. In 2008 this number was better publicized through a storm drain marker project that affected all drains going to Bellingham Bay. In 2009 modifications are being made to better publicize the number on our website.**

## **2009**

**The Source Control Program continues to deal directly with businesses to provide them technical assistance and pollution prevention education on the hazards of improper**

waste disposal and illicit discharges. Specialists meet with business owners/managers to discuss; wastes sent to the sanitary sewer and storm sewer, waste disposal and storage practices, sector specific permitting requirements, designation of dangerous wastes, spill plans and equipment, fueling operations, washing practices, outdoor storage and maintenance activities, and much more.

Industry sectors visited in 2009 include auto body shops, auto repair shops, dental offices, electronic waste collection outfits, photo shops, commercial printing facilities, landscaping companies, veterinarian offices, and others. Illicit discharges found going to the City's stormwater system include: solvent, oils, pressure wash water, metals, vegetable wash water, restaurant grease, bilge water, soils, soap, cleaners, paint, etc. The following pollutants were found going to sanitary sewer: PERC solvent- from dry cleaning separator water, silver- from photo shops, veterinarians, and dentists, hazardous plate developers- commercial printers, acidic solutions-dry cleaners, pharmaceuticals and disinfectants- veterinarians and dentists, and many others. Hazardous wastes that were improperly disposed of to the solid waste stream include; contaminated shop rags, oil based paints, inks, pharmaceuticals, anesthesia capture media, partially empty aerosols, mercury amalgam, sharps, pesticides and pesticide containers, and more.

Through the Local Source Control Program the improper waste disposal practices were identified and business practice changes were documented so that the long list of pollutants are now correctly disposed of. The Local Source Control program has been extremely effective in assisting the City in meeting its obligations per the permit. Specialists have been able to document many changed behaviors and illicit discharge corrections in businesses to help stop pollution.

Current funding for the program comes from the state Local Toxics Control Account and the Department of Ecology. Current funding can sustain the Local Source Control program through till June of 2011. After June of 2011 if funding is not extended, the City is unsure if it will be able to meet the requirements of the permit with the same efficiency, and provide the same depth of industry specific education, and detail as the local source control program has provided.

The Stormwater Hotline is up and running.

## 2010

The City believes it is in compliance with the requirements set forth under d.i. regarding the Public Education and Outreach section of the SWMP.

The Source Control Program continues to deal directly with businesses to provide them technical assistance and pollution prevention education on the hazards of improper waste disposal and illicit discharges. Industry sectors visited in 2010 include auto body shops, auto repair shops, dental offices, gas stations, and others.

Illicit discharges found going to the City's stormwater system include: contaminated sludge from gas station catch basins, pressure wash water i.e. detergents, degreasers, fuel, oils and grits, car washing wastes, windshield wiper fluid to ground water, sheens

of petroleum at gas stations, petroleum products from inadequately maintained oil/water separators and catch basins, suspected auto body waste, potential metals from outdoor storage of computer CRTS, televisions, and leaking metals collection bins. The following pollutants were found going to sanitary sewer: oily water from floor cleaning practices and antifreeze. Hazardous wastes that were improperly disposed of to the solid waste stream include; spill clean-up materials that in some cases may designate as dangerous waste, fluorescent light tubes i.e. mercury, HOC containing paint booth filters.

The Local Source Control Program continues to identify improper waste disposal practices. Business practice changes were documented so that the long list of pollutants are now correctly disposed of. Current funding can sustain the Local Source Control program through till June of 2011. After June of 2011 if funding is not extended, the City is unsure if it will be able to meet the requirements of the permit with the same efficiency, and provide the same depth of industry specific education, and detail as the local source control program has provided.

The City believes it meets requirements under d.ii. which includes publication of the hotline, maintaining records of calls, and tracking follow-up actions resulting from those calls. The City has a file for tracking these items and receives monthly reports on total number of calls to the hotline.

**All Public Employees were provided a training on recognition of contaminated discharges and procedures for reporting and containing such discharges.**

e. The City will evaluate and assess the IDE program as determined necessary for compliance. This will include tracking the number and type of spills or illicit discharges identified; inspections made; and any feedback received from public education efforts. A summary of relevant information will be included our annual report in accordance with section S9 (Reporting and Recordkeeping Requirements) of the permit.

## 2008

**This portion of the requirements would seem to need to comply by August 15, 2011. The City is in partial compliance at this point and we are using the Local Source Control program that we are engaged in with Ecology to help refine our recordkeeping.**

## 2009

**City is constantly reviewing program procedures for improved implementation.**

## 2010

**Currently the City tracks the items listed above. It is expected that organization of this information will be refined in the coming months to meet the August 15, 2011 deadline.**

f. The City has provided or will provide appropriate training for municipal field staff on the identification and reporting of illicit discharges into MS4s according to the following schedule:

i. No later than August 15, 2009, the City will have provided training for all municipal field staff who are responsible for identification, investigation, termination, cleanup, and reporting illicit discharges, including spills, improper disposal and illicit connections. Follow-up training will be provided as needed to address changes in procedures, techniques or requirements. The City will document and maintain records of the training provided and the staff trained.

ii. No later than February 15, 2010, an ongoing training program will be developed and implemented for all municipal field staff, which, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system. Staff will be trained on the identification of an illicit discharge/connection, and on the proper procedures for reporting and responding to the illicit discharge/connection. Follow-up training will be provided as needed to address changes in procedures, techniques or requirements. The City will document and maintain records of the training provided and the staff trained.

## 2008

**Webinars held in 2008 related to stormwater:**

**US EPA Stormwater Programs Webcast Series February 6, 2008**

**Assessing Effectiveness of Municipal SW Program EPA June 4, 2008**

**New Rules on Stormwater & Puget Sound Devel. The Seminar Group November 14, 2008**

**Watershed Forestry webinar December 2, 2008**

**Sustainability Series APWA October 30, 2008, December 11, 2008**

## 2009

**The City has 34 Certified Erosion and Sediment Control Lead (CESCL) trained personnel on staff. Seven staff persons attended the Ecology Stormwater Site Plan Review in Bellevue in December. EPA webcast(s) were made available and stormwater training was provided at staff meetings.**

## 2010

**The City has 34 Certified Erosion and Sediment Control Lead (CESCL) trained personnel on staff. EPA webcast(s) were made available and stormwater training was provided at staff meetings. In 2010, the City held trainings for the following crews in July of 2010, Surface and Storm, Streets, Water, Sewer, and Traffic. City Stormwater Dept staff hosted this training which included a power point and question/answer session that focused on illicit discharge identification, removal, and prevention. Attendance included 61 City public works operations employees. The City is meeting requirements to document trainings and maintain records and can make them available upon request.**

## 4. CONTROLLING RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT AND CONSTRUCTION SITES

The City of Bellingham presently has or will have a program to reduce pollutants in stormwater runoff to our municipal stormwater system from new development, redevelopment and construction site activities. This program has or will be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The program will apply to private and public development, including roads. The “Technical Thresholds” in Appendix 1 will be applied to all sites 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale.

The minimum performance measures are:

a. The program does or will include an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Pursuant to the Permit condition contained in S5.A.4 if a new ordinance is necessary for the City to adopt to meet the requirements of the Permit, the City, at this time, has no plans to extinguish existing code requirements that are more protective of stormwater than permit condition S5.C.4. However, any required revisions to our code or any monitoring or reporting element required by the Permit may only apply to sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. Also, should it be found that condition S5.A.2 of the Phase II Permit is removed or deemed invalid, the City reserves the ability to update and/or remove current code sections. Any code changes necessary to be compliant with the Phase II permit, as currently written, will be adopted by August 15, 2009 and will include at a minimum:

i. The Minimum Requirements, technical thresholds, and definitions in Appendix 1 or an equivalent approved by Ecology under the NPDES Phase I Municipal Stormwater Permit, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 will be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of basin plans or other similar water quality and quantity planning efforts. Such local requirements will provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1 of the Phase II Permit.

### 2007

**The minimum requirements of the 2005 Stormwater Management Manual for Western Washington manual, with some changes, were adopted by ordinance on May 16, 2006. The City will examine this code and will make changes found necessary for compliance with the Permit.**

**The City of Bellingham has previously and will again make the applicable ordinances or Bellingham Municipal Code (BMC) 15.42 available to the Department of Ecology. The City of Bellingham requests a determination by Ecology that our code is compliant with the terms of the Phase II municipal permit.**

ii. A site planning process and BMP selection and design criteria that, when used to implement the minimum requirements in Appendix 1 (or equivalent approved by Ecology under the Phase I Permit) will protect water quality, reduce the discharge of pollutants to the maximum extent practicable and satisfy the State requirement under Chapter 90.48 RCW to apply all known, available and reasonable methods of prevention, control and treatment (AKART) prior to discharge. Permittees will document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the maximum extent practicable, and satisfy State AKART requirements.

## 2007

**The City of Bellingham has chosen to use the site planning process and BMP selection and design criteria in the 2005 Stormwater Management Manual for Western Washington. The Manual was adopted by reference into BMC 15.42 on May 16, 2006.**

iii. The legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the City's municipal stormwater systems.

## 2007

**The City previous and current stormwater code provides the ability to enter onto properties for the purposes of inspecting stormwater facilities.**

iv. Provisions to allow non-structural preventive actions and source reduction approaches such as Low Impact Development Techniques (LID), measures to minimize the creation of impervious surfaces and measures to minimize the disturbance of native soils and vegetation. Provisions for LID should take into account site conditions, access and long term maintenance.

## 2007

**BMC 15.42. includes the adoption of the 2005 Low Impact Development Technical Manual for Puget Sound to be used in concert with the 2005 DOE manual. Further, the City has adopted financial incentives for the use of Low Impact Development strategies.**

v. If the City allows construction sites to apply the "Erosivity Waiver" in Appendix 1, Minimum Requirement #2 of the Permit, the City will administer its existing stormwater code (or provide code revisions if determined necessary) to provide escalating enforcement sanctions for construction sites that provide notice to the City of their intention to apply the waiver but do not meet the requirements. Code conditions and/or code changes will include (timeframe restrictions, limits on activities that result in non-stormwater discharges, and implementation of appropriate BMPs to prevent violations of water quality standards) to qualify for the waiver.

**2008** (this response is for the entirety of subsection a)

The City began the process to update codes to meet TMDL requirements for Lake Whatcom and is including some smaller code changes to better meet this program requirement. All other comments from 2007 remain applicable.

**2009** (this response is for the entirety of subsection a)

The City of Bellingham has been in compliance with this requirement since 1995 with the adoption of our initial stormwater ordinance. Since that time the City has evaluated and required runoff controls. In 2006, we modified our ordinance to align with the 2005 Stormwater Management Manual for Western Washington. Our program is more restrictive than the NPDES permit and includes some level of stormwater plan review and city permitting for any project that exceeds greater than 500 square feet of soil disturbance or more than 120 square feet of impervious surface. Further all permitted projects receive inspection. The portion of our program that exceeds the permit requirements will be continued by the City but is not subject to requirements for facility tracking, maintenance or record keeping. Enforcement of permits less than one acre in size may or may not meet the standards of enforcement within the permit.



**2010** (this response is for the entirety of subsection a)

**No Changes in Codes since 2009.**

b. The program will include a permitting process with plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in Definitions and Acronyms section of the Phase II Permit). At a minimum, this program has been or will be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The process will be fully in place no later than August 15, 2009.

i. Except as provided in S5.C.4.b.vii below, review of all stormwater site plans for proposed development activities.

ii. Except as provided in S5.C.4.b.vii. below, inspect, prior to clearing and construction, all known development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Identifying Construction Site Sediment Transport Potential.

iii. Except as provided in S5.C.4.b.vii below, inspect all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.

iv. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs. Also, verify a maintenance plan is completed and responsibility for maintenance is assigned. Enforce as necessary based on the inspection.

v. Compliance with the inspection requirements in (ii), (iii) and (iv) above will be determined by the presence and records of an established inspection program designed to inspect all sites and achieving at least 95% of scheduled inspections.

vi. An enforcement strategy will be developed and implemented to respond to issues of non-compliance.

vii. If the City chooses to allow construction sites to apply the "Erosivity Waiver" provided for in Appendix 1, Minimum Requirement #2 of the Phase II Permit, the City is not required to review the construction stormwater pollution prevention plans as part of the site plan review in (i) above, and is not required to perform the construction phase inspections identified in (ii) and (iii) above related to construction sites which are eligible for the erosivity waiver.

## 2007

**The City of Bellingham considers itself in compliance with the permitting, inspection and enforcement elements of the Permit indicated above. BMC 15.42 contains the requisite elements to meet this requirement. The City has had in place a permitting, inspection and enforcement program since 1995. The City will provide for this element at its current level for all sites. Any inspection, reporting or compliance requirements that are greater than those specified by our existing code may only be provided for sites greater than the one acre threshold required by the Permit.**

## 2008

**The comments from above still apply. The City has been in compliance for this section for all permits that are one acre or larger or are part of a phased development plan for one acre or more. The City has allowed one erosivity waiver for a public project in 2008.**

## 2009

**The City of Bellingham has been in compliance with this requirement since 1995 with the adoption of our initial stormwater ordinance. Since that time the City has evaluated and required runoff controls. We have also began the process of inspection for all development activities regarding stormwater.**

## 2010

**The City of Bellingham is in compliance with the requirements of the Permit. The City's regulations prior to the advent of the Permit are also still in place. City regulations that exceed those required by the Permit are not subject to the requirements of the Permit in**



**terms of reporting, specific development review procedures/records or inspection frequency/records.**

c. The City of Bellingham will provide stormwater operational procedures to verify adequate long-term operation and maintenance (O&M) of post-construction stormwater facilities and BMPs that are permitted and constructed pursuant to (b) above. At a minimum, this program has been or will be applied to all sites constructed after February 16, 2007 that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. These provisions will be in place by August 15, 2009 and will include:

i. Existing or new stormwater code elements, and/or written policies and procedures, that clearly identifies the party responsible for maintenance, requires inspection of facilities in accordance with the requirements in (ii) through (iv) below, and establishes enforcement procedures.

ii. The City has established or will establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington. For facilities which do not have maintenance standards, the City will develop or require to be developed a maintenance standard.

(1) The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between the period of inspections is not a permit violation.

(2) Unless there are circumstances beyond the City's control, when an inspection identifies that a facility, meeting the criteria of c above, is in exceedence of the maintenance standard, maintenance will be performed according to the following schedule:

- Within 1 year for wet pool facilities and retention/detention ponds.
- Within 6 months for typical maintenance.
- Within 9 months for maintenance requiring re-vegetation, and
- Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the City's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. When maintenance timeframes are exceeded for facilities covered under this permit, the City will document the circumstances and how they were beyond our control.

iii. The City will provide annual inspections of all stormwater treatment and flow control facilities (other than catch basins and those facilities not covered by the

Permit) permitted by the City according to S5.C.4.b. unless there are maintenance records to justify a different frequency.

Reducing the inspection frequency shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the City may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with condition G19 of the Permit Certification and Signature.

iv. The City will provide Inspections of all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, every 6 months during the period of heaviest house construction (i.e., 1 to 2 years following subdivision approval) to identify maintenance needs and enforce compliance with maintenance standards as needed.

## 2007

**The City has a very good program for maintenance of City owned facilities. The City also has a policy of accepting stormwater management systems that are constructed as a part of a residential subdivision that would have a mix of private and public stormwater discharges. Stormwater detention and water quality systems are captured in a maintenance management system and are programmed for inspection and maintenance management. The maintenance section of the Stormwater Utility is additionally provided with system drawings and any written procedures for use during maintenance.**

## 2008

**The City has continued to provide compliance with inspection and maintenance for all publicly owned facilities. Records available on demand. The City has everything in place for the start of private facility inspections and maintenance . The City has a GIS based tracking system for private facility inspections and maintenance reports. In 2009 the City will begin the actual inspection program for all facilities that have been developed for projects that are one acre or greater in size and after February 16, 2007. In 2009 an additional FTE has been provided within the program to help meet this requirement. Additionally, as a part of our Source Control Program, rudimentary inspections are currently being conducted for storm facilities on commercial and industrial properties. This work is currently funded by Ecology and we are hopeful of continuing this program to 2011.**

## 2009

**The City is now in the process of providing inspections for private stormwater facilities. City began inspecting private facilities with the hiring of an FTE in 2009. All required private facilities will have been inspected by the August 16, 2010 deadline. The City has other stormwater facilities that by the terms of the permit are not required to be inspected but the city wants to inspect these as well outside of the NPDES requirements. Additionally, as a part of our Source Control program, rudimentary inspections are still**

being conducted of storm facilities on commercial mainly industrial type properties. This work is currently funded till June of 2011.

## 2010

**All required facilities that meet the requirements listed above were inspected during the inspection year of 2010. Additionally, the City of Bellingham assists the private facility owner by conducting inspections on facilities that do not meet the requirements. NPDES required facility inspections are tracked separately from non-NPDES facility inspections. Both are tracked through the City of Bellingham's Private Facility Inspection Program. See annual report for specific numbers of non-NPDES vs. NPDES inspections for 2010.**

d. The program will include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records pertinent to the requirements of the Permit. Records of maintenance inspections and maintenance activities for facilities governed by the Permit will be maintained. The City will keep records of all projects disturbing more than one acre, and all projects of any size that are part of a common plan of development or sale that is greater than one acre that are approved after the effective date of this Permit. The record retention period will at minimum meet the requirements of the State.

## 2008

See above for record issues.

## 2009

The City keeps records of the above listed items and can be provided upon request.

## 2010

The City keeps records of the above listed items and can be provided upon request.

e. The City has and will continue to make available copies of the "Notice of Intent for Construction Activity" and copies of the "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment. The City will also continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.

## 2008

These documents have been placed within our permit center with advertisement and information provided.

## 2009

These documents are available for and/or provided to customers in the permit center.

## 2010

**These documents are provided for customers at the City Hall Permit Center.**

f. By August 15, 2009 the City will verify that all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training will be provided as needed to address changes in procedures, techniques or staffing. The City will document and maintain records of the training provided and the staff trained.

## 2007- This covered d, e and f sections in the previous report

**Stormwater maintenance for private facilities is not as far along as the public sector. The City has to date kept a record of private facilities but the City has lacked the ability to enact a private inspection program. The City at this time can commit only to the goal of inspecting all private facilities that were constructed after the effective date of the Permit. Full compliance will be further limited to only those facilities that were constructed as part of a one acre or larger development or common development plan.**

## 2008

**Most staff has already been trained since before the issuance of the NPDES permit. Training and retraining are ongoing activities. Below is a list of trainings that have some applicability. Additionally group and one on one trainings are conducted with personnel by the Stormwater Manager, Stormwater Engineer and Senior Stormwater Technician.**

**Webinars held in 2008 related to stormwater:**

**US EPA Stormwater Programs Webcast Series February 6, 2008**

**Assessing Effectiveness of Municipal SW Program EPA June 4, 2008**

**New Rules on Stormwater & Puget Sound Devel. The Seminar Group November 14, 2008**

**Watershed Forestry webinar December 2, 2008**

**Sustainability Series APWA October 30, 2008, December 11, 2008**

## 2009

**Training and retraining are always ongoing. Several webinars were made available. Staff attended various trainings on CESCL, Stormwater Site Plan Review, and Construction Stormwater Ecology Training. Many more hours of training were spent one on one out in the field, or in staff meetings.**

## 2010

**Staff attended the following trainings;**

- **Certifications and recertification on CESCL (34 attendees)**
- **Stormwater Ecology Training (2 Attendees)**
- **WSDOT Drainage Inspection Conference (1 attendee)**
- **Water Operators Conference 4 days (2 attendee)**

- **Hot Mix Asphalt Placement WSDOT Training (1 attendee)**
- **WSDOT Drainage Inspection Training (1 attendee)**
- **ESA Track 3F Course #112692**
- **Several webinars (various staff)**
- **One on one training out in the field**
- **Staff meetings**

## 5. POLLUTION PREVENTION AND OPERATION AND MAINTENANCE FOR MUNICIPAL OPERATIONS

By February 15, 2010 the City will develop and implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The minimum performance measures are:

- a. The City will establish maintenance standards that are, as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington. For facilities which do not have maintenance standards, the City will develop a maintenance standard.
  - i. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.
  - ii. Unless there are circumstances beyond the City's control, when an inspection identifies an exceedence of the maintenance standard, maintenance will be performed according to the following schedule:
    - Within 1 year for wet pool facilities and retention/detention ponds.
    - Within 6 months for typical maintenance.
    - Within 9 months for maintenance requiring re-vegetation.
    - Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the City's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedence of the required timeframe, the City will document the circumstances and how they were beyond their control.

### 2008

**The City is fully in compliance with this section for all publicly owned stormwater facilities. It is unclear if we are required per the permit to provide maintenance for those facilities that serve less than one acre. If this is not a requirement, the City withholds stating that those facilities are being maintained as a part of this permit compliance.**

### 2009

**The City adopted the 2005 Stormwater Management Manual for Western Washington in May 2006 and in doing so have adopted the maintenance standards from the manual as our minimums.**

**The City began tracking public facility maintenance in 1999 using a proprietary program called Hansen. Data outputs from that system are available on demand.**

## **2010**

**Publicly owned stormwater vaults are inspected once a year. Stormwater filter vaults are inspected on an every three month schedule. Maintenance occurs within the above stated timeline requirements.**

b. The City will provide annual inspections of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins and any facility deemed to not be subject to the Permit, and will take appropriate maintenance actions in accordance with the adopted maintenance standards. The annual inspection requirement may be reduced based on inspection records.

Any reduction in inspection frequency will be based on maintenance records of double the length of time of the required inspection frequency of the Permit. In the absence of maintenance records, the City may substitute written statements to document a specific less frequent inspection schedule. The written statements will be based on actual inspection and maintenance experience and will be certified in accordance with G19 *Certification and Signature*.

## **2008**

**Subject to the limitation in section a above the City is fully compliant with this permit condition. Our maintenance for all City owned stormwater facilities is done through a proprietary maintenance software system.**

## **2009**

**The City of Bellingham is in compliance with performing maintenance within prescribed timelines for public facilities.**

## **2010**

**The City continues to provide annual inspections of all municipally owned or operated permanent stormwater treatment and flow control facilities as stated above. The City has taken appropriate actions in accordance with adopted maintenance standards. Records can be made available per request.**

c. The City will provide spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities (required by the Permit), that may be affected. The City will conduct repairs or take appropriate maintenance action in accordance with established maintenance standards and based on the results of inspection.

## 2008

The City does provide for such inspections after major events. 2008 did not have any recorded event that would trigger that need.

## 2009

The January 2009 storm exceeded the 10 year recurrence level and facilities were inspected by a combination of City resources and outside engineering firms to determine damage issues. Appropriate actions were taken to remediate damage.

## 2010

There were no storms over the 10 year frequency in 2010.

d. Inspection of all catch basins and inlets owned or operated by the City will occur at least once during the term of the Permit. Catch basins will at a minimum be cleaned as to comply with maintenance standards established in the 2005 *Stormwater Management Manual for Western Washington*. Decant water will be disposed of in accordance with Appendix 6 of the Permit *Street Waste Disposal*.

The City may conduct inspections on a “circuit basis” whereby a sampling of catch basins and inlets within each circuit is inspected to identify maintenance needs. If this method is used we will include in the sampling an inspection of the catch basin immediately upstream of any system outfall. All catch basins within a circuit will be cleaned at one time if the inspection sampling indicates cleaning is needed to comply with maintenance standards established under S5.C.4.c of the Permit.

The City may also, as an alternative to inspecting catch basins on a “circuit basis,” inspect all catch basins, and clean only catch basins where cleaning is needed to comply with maintenance standards.

## 2008

The City has currently 14,405 catch basins in our system. We have a regular maintenance program for inspecting these catch basins and removing detritus from them. In 2007, 9,226 public catch basins were cleaned. In 2008, 4,400 were also cleaned. We are in substantial compliance with this requirement at this point in time.

## 2009

For at least twenty years the City has had a program for catch basin cleaning. Our current cycle allows for cleaning of all catch basins on no more than once every four years. The City is pursuing an alternative method to identify heaviest deposition areas and to adjust the program commensurately.



## 2010

**The City desires better efficiency in the vector waste and street sweeping collection and disposal process. Research is currently being done to improve the process.**

e. The City will indicate compliance with the inspection requirements indicated in a, b, c and d above by either instituting an inspection program designed to inspect all sites and achieving inspection of 95% of all sites. Alternatively, the City may demonstrate compliance through records indicating that at least 95% of all catch basins, inlets and other pertinent facilities have been inspected and/or maintained within the term requirements of the permit.

## 2008

**City appears to be easily meeting the above goal. We will be looking at changing frequency as a cost cutting measure in the future. Additionally, the City is also working with Ecology on materials disposal practices. We fully intend to follow State guidance for catch basin materials disposal.**

## 2009

**The City continues to be in compliance with this requirement through the annual maintenance of all storm facilities and/or are meeting minimum maintenance timeframes for catch basins and inlets.**

## 2010

**The City is meeting and or exceeding requirements. This year 4,874 catch basins were cleaned.**

f. The City has established or will establish practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City, and road maintenance activities conducted by the City. The following activities will be addressed:

- Pipe cleaning
- Cleaning of culverts that convey stormwater in ditch systems
- Ditch maintenance
- Street cleaning
- Road repair and resurfacing, including pavement grinding
- Snow and ice control
- Utility installation
- Pavement striping maintenance
- Maintaining roadside areas, including vegetation management
- Dust control

## 2008

The City is working on establishing lower impact maintenance practices. In particular, the City is making changes for our Lake Whatcom Watershed TMDL to better limit phosphorus loading resultant from road maintenance and snow/ice control.

## 2009

The following issues are addressed as shown:

### Pipe cleaning-

The City of Bellingham utilizes a combination of vactor and jet rod system to avoid and minimize water quality effects.

### Cleaning of culverts that convey stormwater in ditch systems-

The City of Bellingham utilizes a combination of vactor and jet rod system to avoid and minimize water quality effects.

### Ditch Maintenance-

The City of Bellingham has sharply reduced the amount of ditch maintenance within our system, only conducting it where perceived capacity issues are determined. When maintenance is required, ditches are protected by installation of BMPs, including temporary check dams and patchwork maintenance practice (only cleaning a portion of ditch leaving intact areas) . Upon completion of ditching grasses are re-established by a minimum of re-seeding.

### Street cleaning-

City employs two regenerative air sweepers. Street sweeping is employed as a tool in prevention of water quality pollution. Testing of existing sweepers indicates that street sweeping it is an effective BMP. The City sweeps roads in the Lake Whatcom watershed an average of two to three times a month to reduce inputs of phosphorus. Questions are still being considered regarding street sweeping as a BMP in for reducing phosphorus inputs to Lake Whatcom. City of Bellingham personnel sampled materials taken up by the regenerative air sweepers and found that a significant proportion of the materials swept up by the street sweeper was fine grain particles less than 0.104mm.

### Road repair and resurfacing including pavement grinding-

All road repair other than square cut patching employ BMPs for prevention of water pollution.

### Snow and ice control-

The City of Bellingham has examined materials for impact on water quality including sand mixes utilized for ice control. Lake Whatcom watershed is sensitive to phosphorus inputs. Testing has been done on deicing compounds and sands for assessing lowest phosphorus quantities.

#### **Utility installation-**

Training has been provided to crews and BMP's for protection of stormwater through BMPs is employed to the greatest extent practicable. The nature of utilities does include emergency repairs. In the case of emergency repairs the City works on the premise of containment of the spill or rupture first with erosion controls and remediation a close second.

#### **Pavement striping maintenance-**

If yellow paint requires repainting it is just painted over. If yellow paint is to be removed, it is hydro-blasted (high pressure water blasting) and vacuumed up and disposed of. The hydro-blasting eliminates the dust possibility that would occur with dry grinding. Two years ago the city had an extensive removal of yellow curb paint throughout the City. It was hydro-blasted and we set up clean up areas that prevented any run off from entering a storm drain. Currently the yellow paint is still leaded but the City is looking into making the switch to water based paint which likely would not contain lead. White paint is not leaded.

#### **Maintaining roadside areas, including vegetation management-**

Currently Public Works has a contract with a licensed applicator to spray the cracks between the right of way and the sidewalk. All other areas are maintained by mechanical means.

#### **Dust Control-**

The City of Bellingham endeavors through construction practices to avoid soil deposition. The City utilizes and requires sweepers to be outfitted with water input for dust prevention during sweeping.

## **2010**

**The City continues work under the same policy's listed for 2009. In 2011 it is expected that the City will have use of a third street sweeper.**

g. The City will establish or has established the implementation of policies and procedures to reduce pollutants in discharges from all lands owned or maintained by the City and that are subject to this Permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities. These policies and procedures will address, but are not limited to:

- Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans.
- Sediment and erosion control.
- Landscape maintenance and vegetation disposal.
- Trash management.
- Building exterior cleaning and maintenance.

## 2008

The City has policies for some of these issues now but are continuing to refine and augment these policies for both the Lake Whatcom Watershed and the City in general.

## 2009

The City has in place a pesticide policy covering parks and open space. City has had the policy since 1984.

The City has an improved draft integrated pest management plan that was developed in 2003 and is used as a guidance document to augment existing adopted policy. The City will be working towards formulation of a new IPM in 2010.

Lands owned by the City are subject to meeting water quality standards through utilizing erosion control BMPs.

The City of Bellingham operates a Clean Green facility for the benefit of City as well as service for Whatcom County.

We have a litter compliance officer that works with stormwater staff. Staff is working closely with local service provider to improve trash management.

Where cleaning and maintenance would create contaminated runoff water is collected and directed to sanitary sewer discharge.

## 2010

No change, see above.

h. The City will develop and implement an on-going training program for employees of the City whose construction, operations or maintenance job functions may impact stormwater quality. The training program will address the importance of protecting water quality, the requirements of this Permit, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training will be provided as needed to address changes in procedures, techniques or requirements. The City will document and maintain records of training provided.

## 2008

**Webinars held in 2008 related to stormwater:**

**US EPA Stormwater Programs Webcast Series February 6, 2008**

**Assessing Effectiveness of Municipal SW Program EPA June 4, 2008**

**New Rules on Stormwater & Puget Sound Devel. The Seminar Group November 14, 2008**

**Watershed Forestry webinar December 2, 2008**

**Sustainability Series APWA October 30, 2008, December 11, 2008**

## 2009

Within the Public Works Department there are thirty-four staff persons that are CESCL certified. These personnel work for the street, storm, engineering, and water departments. In addition, in house trainings have been provided to employees during staff meetings and webinars.

## 2010

The Public Works Department currently employs thirty-four CESCL certified personnel. These personnel work for the street, storm, engineering, and water departments. In addition, in house trainings have been provided to employees during staff meetings and webinars. See more detail in the annual report and other section of the SWMP.

i. The City will develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City in areas subject to this Permit that are not required to have coverage under the Industrial Stormwater General Permit. Implementation of non-structural BMPs will begin immediately after the pollution prevention plan is developed. A schedule for implementation of structural BMPs will be included in the SWPPP. A generic SWPPP that can be applied at multiple sites may be used by the City to comply with the Permit. The SWPPP will include periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP.

## 2008

The City has provided for many aspects of the plan to date. These include:

- Construction of covered storage bins
- Increased sweeping frequency within maintenance yards.
- Vehicle washing is conducted in doors.
- Segregation berms for fueling activities with oil water separation
- Additional items need to be addressed and memorialized in a SWPP.

## 2009

In addition to the continuance of 2008 indicated items a source control survey was conducted in 2009 of materials storage yards at Parks and Public Works Operations facilities. Results of surveys are available and recommended changes are in the process of enactment.

## 2010

The City has met the intent of this requirement through mapping of the areas & storm systems along with scheduled maintenance activities such as sweeping, catch basin cleaning, hazardous waste collection, etc.

j. Records of inspections and maintenance or repair activities conducted by the City as is necessary for the Permit will be maintained in accordance with Permit condition S9 *Reporting Requirements*.

## 2007

This yearly information was general in nature and applicable to the entire PPOMMO section.

The City has a very good program for maintenance of City owned facilities. The City also has a policy of accepting stormwater management systems that are constructed as a part of a residential subdivision that would have a mix of private and public stormwater discharges. Stormwater detention and water quality systems are captured in a maintenance management system and are programmed for inspection and maintenance management. The maintenance section of the Stormwater Utility is additionally provided with system drawings and any written procedures for use during maintenance.

## 2008

Record requirements for section j. will be met.

## 2009

All publically owned facilities are tracked through a combination of GIS and maintenance software. Private facilities are tracked through an integrated GIS application.

## 2010

Same tracking procedures are in place as in 2009.